

NEW TAXA AND COMBINATIONS IN MACHAERIUM (Leguminosae). IV.

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MACHAERIUM NYCTITANS (Vellozo) Benth. var. GARDNERI (Benth.)
Rudd, comb. nov.

Machaerium gardneri Benth., Proc. Linn. Soc. London 4, suppl.:
60. 1860. Type: G. Gardner 357, Brazil, Rio de Janeiro,
Serra dos Orgoas, "3000 ft., forests, July 1837" (holotype
K; isotypes BM, G, K).

MACHAERIUM HATSCHBACHII Rudd, sp. nov.

Arbor, M. sclerocylo Tulasne primo ad aspectu simile sed differt
folioliis plerumque numerosioribus cum pilis longioribus laxiori-
busque, floribus brevioribus, calyce non striato, et fructibus
geniculatis cum ala angustiore.

Tree, to about 20 m. tall; young stems subsericeous, glabrescent; stipules spinescent, divaricate, to about 12 mm. long, 3 mm. wide at the base, caducous; leaves 11-27-foliolate, the axis about 3-11 cm. long, puberulent; leaflets chartaceous, subcoriaceous with age, elliptic, 3-20 mm. long, 2-10 mm. wide, the apex and base obtuse, the upper surface sparsely pubescent with subappressed hairs, glabrescent, the lower surface moderately to densely pubescent with lax or subappressed hairs, the venation reticulate; inflorescences axillary, racemose, the axes tomentulose, bracts fulvo-sericeous, lanceolate, acuminate, 4-7 mm. long, 3-4 mm. wide; bracteoles lanceolate, fulvo-sericeous, 2-3 mm. long, acuminate, 0.7-1 mm. wide; flowers 4.5-6 mm. long; calyx fulvo-sericeous, 2.5 mm. long, 2-2.5 mm. in diameter, the teeth acute, about 1 mm. long or less; petals purplish, the vexillum sericeous on the outer face; fruit winged, geniculate, the wing bent at about a 75° angle, sericeous, glabrescent, 4-5 cm. long including stipe 4-8 mm. long, the body 1.5 cm. long, 5-8 mm. wide, the wing acute at the apex, 2-2.5 cm. long, about 1 cm. wide.

Type: G. Hatschbach 15254, Brazil, Paraná, Campina Grande do Sul, Sítio do Belizario, 23 November 1966 (holotype US no. 2563680; isotypes P, SI). Paratypes: Brazil, Paraná: Piraquara, Campininha, Hatschbach 2652 (SI). Cerro Azul, Morro Grande, Hatschbach 6390 (US). Guaratuba, Rio Itararé, Hatschbach 15118 (L, P, SI, US, WAG). Campina Grande do Sul, Sítio do Belizario, Hatschbach 16280 (L, SI, US). Guaraquecaba, Serrinha, Hatschbach 16506 (L, SI). Guaraquecaba, Rio de Cedro, Hatschbach 18117 (US).

Local name: Jacaranda de espinho.

MACHAERIUM COSTULATUM Rudd, sp. nov.

Frutex interdum scandens, affine M. violaceo Vogel et M. striato J. R. Johnston sed differt folioliis caulibusque glabris et floribus longioribus.

Shrub, sometimes scandent, apparently unarmed; young stems glabrous; stipules caducous, not seen; leaves 5-foliolate, the axis 9-12 cm. long, glabrous; leaflets ovate to elliptic, 5-11 cm. long, 3-6 cm. wide, acuminate, the base rounded, the surfaces glabrous, the venation penni-reticulate; inflorescences axillary, racemose-fasciculate, the axes brown-tomentulose; bracts puberulent, deltoid, somewhat cucullate, 1-2 mm. long, 1-1.5 mm. wide, acute; bracteoles puberulent, broadly ovate, 2-2.5 mm. long, 2.5-3 mm. wide, obtuse to subacute; flowers 11-12 mm. long; calyx puberulent, glabrescent at the base, conspicuously striate or multi-costate, about 5 mm. long, 3 mm. in diameter; petals dark purple or brownish with white markings, villous; fruit not seen.

Type: A. Ducke 1037, Brazil, Amazonas, "Esperança (ad ostium fluminis Javary), in silva "varsea" secus Igarape Santo Antonio," 29 October 1942 (holotype US no. 1832335; isotypes MO, NY, R). Paratype: Brazil, Amazonas: Vaupes, Rio Negro, bank of Rio Papury, sandy soil, Froes 21196 (F, IAN, K, NY).

MACHAERIUM GUANAIENSE Rusby ex Rudd, sp. nov.

Arbor interdum scandens, affine M. latifolio Rusby sed differt folioliis fructibusque pubescentioribus.

Tree or liana, apparently unarmed; young stems fulvo-tomentulose, glabrescent; stipules (bud scales) tomentulose, deltoid, 1-2 mm. long, 2-3 mm. wide, caducous; leaves 3-9-foliolate, the axis tomentulose, glabrescent, 4-14 cm. long; leaflets ovate to ovate-oblong, the terminal leaflet sometimes obovate, 3-10 cm. long, 1.5-5 cm. wide, acute to breviacuminate, the base rounded to subcordate, the upper surface essentially glabrous at maturity, the lower surface moderately pubescent with minute, crispate hairs, the venation penni-reticulate; inflorescences axillary, racemose, the axes tomentulose; bracts minute, tomentulose, deltoid, acute, 1-1.5 mm. long and wide; bracteoles tomentulose, ovate-deltoid, obtuse, 1 mm. long and 1.5 mm. wide; flowers 7 mm. long; calyx subsericeous, faintly striate, 3 mm. long, 1.5 mm. in diameter, the teeth 1 mm. long or less; petals sericeous to villous, the color not known; fruit winged, essentially straight, minutely fulvo-velutinous, glabrescent, especially at the apex, 6-7 cm. long including stipe 4-5 mm. long, the body 1.5-2 cm. long, 1-1.5 cm. wide, the wing 3.5-5 cm. long, about 1.7-2 cm. wide.

Type: H. H. Rusby 1321, Bolivia, La Paz, Guanai, "2000 ft." elevation, May 1886 (holotype NY; isotypes F, GH, MICH, NY, US). Paratypes: Bolivia: La Paz, Basin of Río Bopi, San Bartolome, near Calisaya, 750-900 m. elev., Krukoff 10270 (A, F, NY, US).

MACHAERIUM PENDULIFLORUM Rudd, sp. nov.

Arbor, M. oblongifolio Vogel primo adspectu simile sed dif- fert folioliis minus pubescentibus, floribus brevioribus numero- sioribusque.

Tree, to about 10 m. tall, apparently unarmed; young stems fulvo-tomentulose, glabrescent; stipules caducous, not seen; leaves (3-) 5-9-foliolate, the axis tomentulose, (2.5-) 5-11 cm. long; leaflets subcoriaceous, ovate, about (2.5-) 3-7 cm. long, (1.5-) 2-3.5 cm. wide, breviacuminate with the tip blunt or acute, the base rounded, the upper surface sparsely pubescent with appressed hairs, glabrescent, the lower surface moderately pubescent with subappressed hairs, glabrescent, the venation penni-reticulate; inflorescences axillary, paniculate, pendulous, the axes minutely tomentulose, glabrescent; bracts pubescent, glabrescent, deltoid, acute, 1-5 mm. long, 0.3-1.5 mm. wide; bracteoles pubescent, ovate, obtuse, 1 mm. long or less, about 0.5 mm. wide; flowers about 5 mm. long; calyx brown-sericeous, 2 mm. long, 1-1.5 mm. in diameter, the teeth minute; petals white, blackening on drying, the vexillum sericeous on the outer face; fruit not seen.

Type: C. M. Belshaw 3457, Peru, San Martín, on trail from Lamas to San Antonio near Río Chupiseña, 23-30 September 1937 (holotype US no. 2525904; isotypes F, GH, MO, SI). Paratypes: Bolivia: Santa Cruz, Jorochito, in woods, 500 m. elev., Steinbach 8130 (A, F, GH, K, S, US).